

**WHAT IS CLAIMED IS:**

1. A band saw machine, comprising:

5           a base provided with a motor;

          a driving wheel pivoted on a bottom of the base to be driven for rotation by  
the motor;

10           a movable device movably provided on a top of the base to be moved  
between a distal position and a proximal position;

          a driven wheel pivoted on the movable device;

15           a band saw provided around the driving wheel and the driven wheel;

          a fine adjusting device having a section engaged with the movable device  
and having a contacting portion at a bottom thereof;

20           a transmission device movably disposed on the base and having an end  
connected with the contacting portion of the fine adjusting device;

          a cam device pivoted on the base and having a periphery against the  
transmission device, wherein the periphery of the cam device has an elongate diameter  
25   portion and a short diameter portion which a distance between the elongate diameter

portion and a center of rotation of the cam device is greater than a distance between the short diameter portion and the center of rotation of the cam device;

wherein the cam device is turned between a first position, in which the  
5 elongate diameter portion is against the transmission device to move the movable device to the distal position, and a second position, in which the short diameter portion is against the transmission device to move the movable device to the proximal position, and

10 a handle connected to the center of rotation of the cam device to be operated for turning the cam device.

2. The band saw machine as defined in claim 1, wherein the top of the base is provided with a U-shaped portion with an upward opening on a top thereof, wherein  
15 the U-shaped portion has two parallel straight portions in each of which has a slot on a sidewall thereof so that the movable device is slidably received in the U-shaped portion.

3. The band saw machine as defined in claim 2, wherein the U-shaped  
20 portion is provided with a round connection tube at a center of a bottom thereof and the connection tube runs through the bottom of the U-shaped portion and the transmission device is slidably received in the connection tube.

4. The band saw machine as defined in claim 3, wherein the movable device  
25 has a chamber which a top and a bottom thereof is provided with a thread hole

respectively and the fine adjusting device is engaged with the thread holes and has a portion received in the chamber and the contacting portion of the fine adjusting device is extruded out of the movable base to be connected with the transmission device.

5                    5. The band saw machine as defined in claim 4, wherein the transmission device has a cone recess and the contacting portion of the fine adjusting device is a cone to be rested in the recess.

10                   6. The band saw machine as defined in claim 4, wherein the fine adjusting device has a thread section received in the chamber of the movable device with which a nut is engaged and a spring is received in the chamber with the fine adjusting device running therethrough, wherein the spring has opposite ends thereof against the nut and a sidewall of the chamber respectively.